

Chlorophytum longissimum var. *phukhaense* (Asparagaceae), a New Variety from Thailand

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Based on plants from Doi Phukha, Nan Province, Thailand, we provide the first description of *Chlorophytum longissimum* var. *phukhaense*, var. nov. (Asparagaceae). This variety differs from *C. longissimum* var. *longissimum* in having a long vertical rhizome and an inflorescence that elongates before anthesis.

Key words: Asparagaceae, *Chlorophytum*, *Chlorophytum longissimum*, *Chlorophytum longissimum* var. *phukhaense*, *Chlorophytum malayense*, Doi Phukha, new variety, plantlet, procumbent inflorescence, Thailand

Chlorophytum Ker-Gawl. (Asparagales-Asparagaceae) comprises ca. 150 species, predominantly in tropical areas of Africa and Asia, and extending to northern Australia. In Thailand, eight species have been reported: *C. dolichocarpum* M. N. Tamura (Tamura 1989), *C. intermedium* Craib (Craib 1912, Tamura 1989), *C. laxum* R. Br. (Larsen 1961, Jessop 1979, Tamura 1989), *C. longissimum* Ridl. (Ridley 1907, Jessop 1979), *C. malayense* Ridl. (Jessop 1979), *C. orchidastrum* Lindl. (Larsen 1961, Tamura 1989), *C. simplex* Craib (Craib 1912), and *C. subundulatum* K. Larsen (Larsen 1961). The species often grow on the forest floor or in grasslands.

On October 7, 1997, we found sterile plants of *Chlorophytum* in shaded, mesic sites rich in humus on the floor of montane evergreen *Castanopsis-Lithocarpus* forests at ca. 1600 m alt. on Doi Phukha, Nan Province, northern Thailand (Tamura & Pooma 7033). Although they were similar to *C. malayense* in that the rhizome was long, stout and vertical, *C. malayense* has never been

reported from northern Thailand. We therefore needed to see reproductive organs to identify them exactly. We revisited the site during the estimated flowering/fruiting period of *Chlorophytum* (on June 27, 2008), but none of the plants had reproductive organs (Tamura & Pooma 9616). Accordingly, we transplanted two of them into a greenhouse, hoping they would flower.

On April 24, 2009, the plants in the greenhouse had produced a long, procumbent inflorescence (one of them: Tamura & Pooma 19700), and we realized that they were similar to *Chlorophytum longissimum* rather than to *C. malayense*, whose inflorescence is more or less erect and not especially long. On June 10, 2009, the remaining plant (Tamura & Pooma 19970) developed plantlets at the apex and at a few distal nodes of the inflorescence. On December 15, 2009, one of us (Tamura) revisited the site with Mr. Wittaya Pongamornkul and Mr. Montri Tanaros of Queen Sirikit Botanic Garden, Thailand, and confirmed that all of the fertile plants in the native habitat

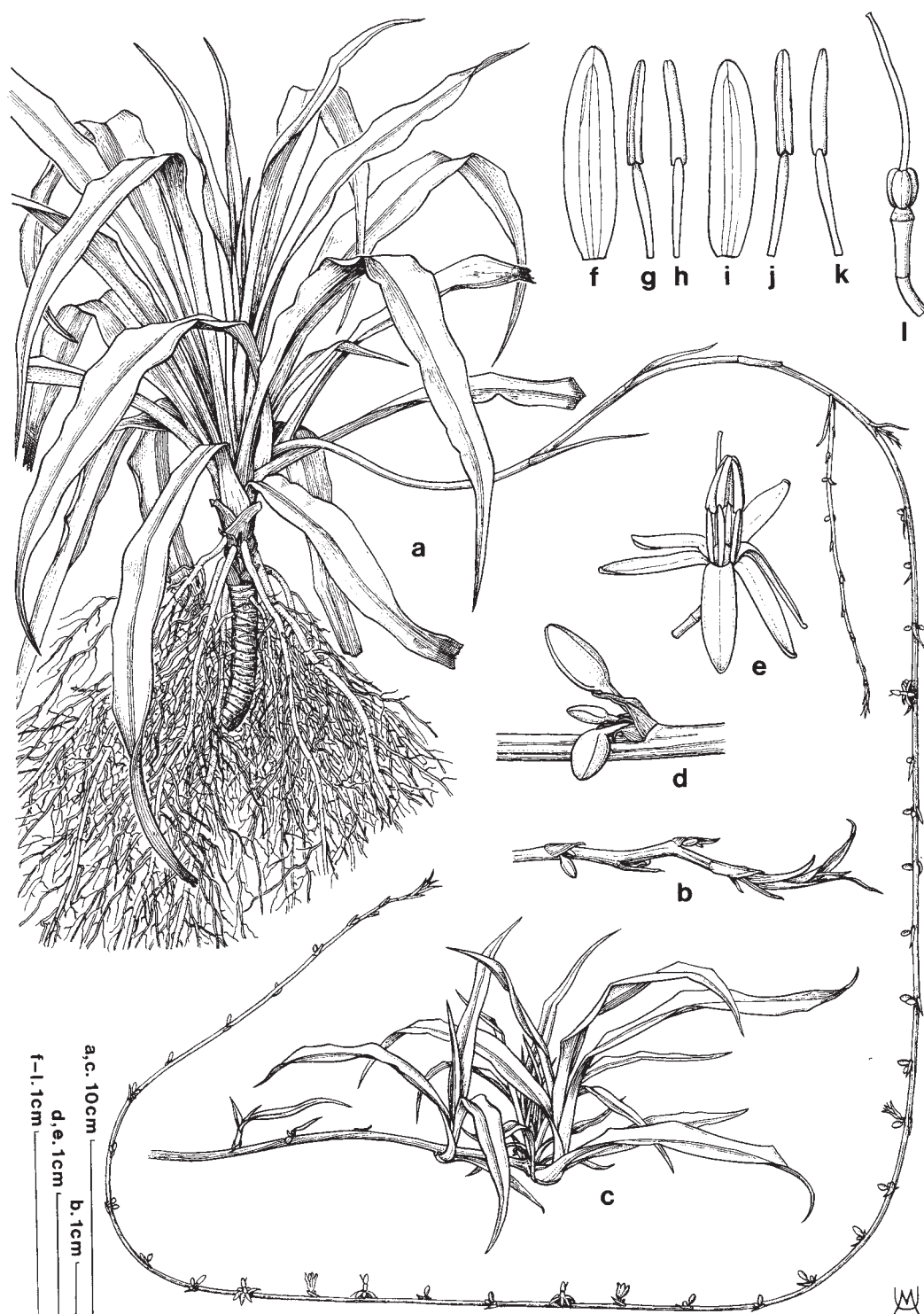


FIG. 1. *Chlorophytum longissimum* Ridl. var. *phukhaense* M. N. Tamura & Pooma. a, Habit at anthesis; b, distal portion of inflorescence at anthesis; c, distal portion of inflorescence after anthesis; d, middle portion of inflorescence, bracts and flower buds; e, flower; f, adaxial surface of outer tepal; g, adaxial surface of outer stamen; h, abaxial surface of outer stamen; i, adaxial surface of inner tepal; j, adaxial surface of inner stamen; k, abaxial surface of inner stamen; l, pistil, pericladium and pedicel (a, b and d–l from 24 Apr. 2009, Tamura & Pooma 19700; c from 10 Jun. 2009, Tamura & Pooma 19970).

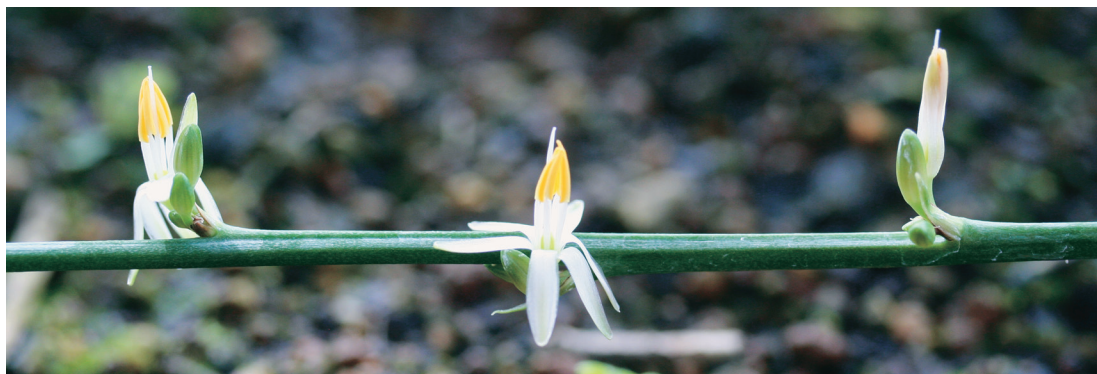


FIG. 2. Middle portion of procumbent inflorescence with upwardly oriented flowers and flower buds of *Chlorophytum longissimum* Ridl. var. *phukhaense* M. N. Tamura & Pooma (Tamura & Pooma 19700).

had a long, procumbent inflorescence with plantlets distally and dehiscent fruits in the middle (Tamura, Pongamornkul & Tanaros 20154).

Although typical *Chlorophytum longissimum* has a short rhizome and an inflorescence that elongates after anthesis, the rhizome is long and vertical and the inflorescence elongates before anthesis in the plants from Doi Phukha. We therefore consider the latter to represent an undescribed variety of *C. longissimum*, and here name it *C. longissimum* var. *phukhaense*. In Thailand, *C. longissimum* var. *longissimum* grows in the peninsular region, while *C. longissimum* var. *phukhaense* grows in the north.

***Chlorophytum longissimum* Ridl. var. *phukhaense* M. N. Tamura & Pooma, var. nov.**
—Figs. 1–2

Similar to *C. longissimum* var. *longissimum* in sharing a long procumbent inflorescence at the fruiting stage, but differing from *C. longissimum* var. *longissimum* in its long stout vertical rhizome and elongation of the inflorescence before flowering.

Typus. THAILAND, N: Nan Province, Doi Phukha, ca. 1600 m alt., 24 Apr. 2009, M. N. Tamura & R. Pooma 19700 (holo-KYO; iso-BKF, KYO).

Herb, perennial. Rhizome terete, vertical, 10 cm long, 1–1.2 cm in diam., internodes 2–5 mm long. Roots to 5 mm in diam. Foliage leaves basal, tufted, broadly linear, 36–47 cm long, 2.6–4.1 cm broad, abaxially pale green, adaxially green, margin smooth or slightly scabrous with minute

assurgent triangular projections, apex attenuate-acuminate, longitudinal veins 29–37, densely arranged near midrib, transverse veinlets between longitudinal veins faint. Scape with inflorescence axis at anthesis 127–150 cm long, 1–4 mm in diam., green, apically pale, procumbent, elongated before anthesis; basal sterile bracts 2 or 3, linear, 3.9–8.5 cm long, pale green. Inflorescence a panicle (dibotryum). Flowers 1–4 per node, bisexual, homochlamydeous, oriented upward; pedicel 5.4–6 mm long, pale green, articulate near middle or proximally (pericladium present); bracts lanceolate-oblong to narrowly lanceolate, 0.6–2.8 cm long, pale green. Tepals 6, free, broadly linear, 1–1.2 cm long, 2.5–3 mm broad, white, spreading or declining, 3-veined. Stamens 6; filaments 5–6 mm long, white; anthers linear, 6 mm long, orange-yellow, introrse. Ovary 2 mm long, pale green, superior. Style 1, filiform, 9 mm long, white. Fruit a capsule.

Distribution and habitat. Known only from the type locality; shaded, mesic, humus-rich sites on floor of montane evergreen *Castanopsis-Lithocarpus* forests.

Other specimens examined. THAILAND, N: Nan Province, Doi Phukha, M. N. Tamura & R. Pooma 7033 (KYO), 9616 (BKF), 19970 (KYO), M. N. Tamura, W. Pongamornkul & M. Tanaros 20154 (KYO).

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